

ABSTRACT

An apparatus is provided to automatically cover and uncover crucibles according to a predetermined procedure in a proximate analyzer. A series of crucibles mounted in a first carousel is heated in a furnace. A second carousel mounted above the first carousel holds crucible covers. A mechanism synchronizes the movements of the carousels so that the heated crucibles are automatically covered and uncovered at the appropriate times during the analysis with a corresponding cover by lowering or raising the second carousel. The movements of both carousels are automatically controlled so that at appropriate points in the testing cycle they rotate simultaneously about a common central axis and a crucible is deposited on a weighing platform by controlling the vertical motion of the entire carousel apparatus. The crucible is weighed either with or without a crucible cover depending on the stage of the analysis without the need of manual intervention.